SURVEY OF THE GEOLOGY OF HAITI

GUIDE TO THE FIELD EXCURSIONS IN HAITI OF THE

MIAMI GEOLOGICAL SOCIETY

March 3 - 8, 1982

Ву

Florentin J-M.R Maurrasse
Florida International University
Miami, Fl. 33199

BIBLIOGRAPHY

- Alvarez, W., F. Asaro, L.W. Alvarez, H.V. Michael, M. Arthur, W. Dean, D. Johnson, M. Kastner, F. Maurrasse, R. R. Revelle and D. A. Russell, 1982, New data on the Cretaceous Tertiary extinction: Abs. AAAS Annual Meeting, Washington, D.C.
- Anonymous, 1980, Field Trip B, Gold deposits Pueblo Viejo, Rosario Dominicana: Road log. 9th Carib. Geol. Conf. Field Guide, p. 51-60.
- Ayala-Castanares, A. 1959, Estudio de algunos microfosiles planctonicos de la calizas del Cretacico Superior de la Republica de Haiti Plaeont. Mexicana 4:41 pp.
- Bermudez, Pedro Joaquim 1949, Tertiary Smaller Foraminifera of the Dominican Republic: Cushman Laboratory for Foraminiferal Research, Special Publication No. 25, Sharon, Massachussets, U.S.A. (December 21, 1949); 322 p., 26 plates.
- Biju-Duval, A., Mascle, L. Montadert and J. Wanneson, 1978, Seismic investigations in the Colombia, Venezuela and Grenada Basins and on the Barbados Ridge for future IPOD drilling in H.J. MacGillavry and D.J. Beets editors: the 8th Carib. Geol. Conf. (Willemstad 1979), Geol. Minjbouw, v. 57, p. 105-116.
- Bowin, C, 1966, Geology of Central Dominican Republic: A case History of part of an island arc: The Geological Society of America, Memoir 98, p. 11-84 + 5 Plates.
- Bowin, C, 1968, Geophysical study of the Cayman Trough: Jour. Geophys. Res., v. 73, p. 11-84.
- Bowin, C, 1975, The Geology of Hispaniola: in A.E.M. Nairn and F.G. Stehli, editors, The Ocean basins and margins, vol. 3, p. 501-552.
- Boyce, R.E., 1973, Physical properties summary, in N.T. Edgar et al., 1973, Initial Reports of the Deep Sea Drilling Project, v. 15, Washington (U.S. Government Printing Office) p. 1067-1068.
- Bracey, D.R. and P.R. Vogt, 1970, Plate tectonics in the Hispaniola area: Geol. Soc. America Bull., v. 81, p. 2855-2860.
- Burbank, S.W., 1924, Igneous rocks, in W.P. Woodring et al., Geology of the Republic of Haiti: Department Travaux Publics, Haiti, p. 260-330.
- Burke, Kevin, P.S. Fox & A.E.C. Sengor, 1978, Buoyant ocean floor and the evolution of the Caribbean: Jour. Geophys. Res., v. 83, No. 138, Aug. 10, 1978, p. 3949-3954.
- Butterlin, Jacques, 1950, Contribution à l'Etude de la géologie de la Bordure Sud du Cul-de-Sac (Haiti, Grandes Antilles): Société Haitienne d'Histoire, de Géographie et de Géologie, rev. No. 76, vol. 21, p. 1-79.
- Butterlin, J. 1954, La Géologie de la République d'Haîti et ses rapports avec celle des régions voisines: publ. comm. 150e. anniversaire de l'Indépendance d'Haîti, secret. presid. (Port-au-Prince): 446 pp.
- Butterlin, Jacques, 1957, Les Formations écocenes sédimentaires et ignées des Montagnes Noires (République d'Haiti) et leur importance pour l'histoire géologique des Antilles: Soc. Geol., France, Bull. 6e sér., vol. 7, p. 505-517, 1 fig.
- Butterlin, Jacques, 1960, Géologie Générale et Régionale de la République d'Haîti: Mém. Inst. des Hautes Etudes de l'Amérique Latine, VI, Paris, 194 p. 18 pls.

- Case, J.E., 1974, Major basins along the continental margin of Northern South America, in C.A. Burk and C.L. Drake, editors, The Geology of Continental Margins, Springer Verlag, p. 733-741.
- Case, J.E., 1975, Geophysical Studies in the Caribbean Sea: in A.E. M. Nairn & F.G. Stehli (eds), The ocean basins and margins, v. 3, p. 107-180.
- Case, J.E. and T.L. Holcombe, 1980, Geologic-tectonic map of the Caribbean region: U.S. Geological Survey Miscellaneous Investigations Map I-1100, scale 1: 2,500,000.
- Cheilletz, A., 1976, Etude géologique et métallogénique des indices àcuivre et molybdène de type porphyre cuprifère de la zone de Vert de Gris, Jean-Rabel, Presqu'ile du Nord-Quest, Haîti: Thèse de 3e cycle, Univ. Nancy, France, 182 p. + figs.
- Christofferson, E., 1973, Linear magnetic anomalies in the Colombia Basin, Central Caribbean Sea: Geol. Soc. Amer. Bull. v. 84, p. 3217-3230.
- Christofferson, E. 1976, Colombia Basin magnetism and Caribbean plate tectonics: Geol. Soc. Amer. Bull. v. 87: p. 1255-1258.
- Coleman, R.G. 1977, Ophiolites, ancient oceanic lithosphere?: Springer-Verlag Min. Rocks Series 12: 229 pp.
- Cooke, C.W., 1920, The Stratigraphic significance of Orthaulax: Geol. Soc. America Bull., v. 31, p. 206.
- Crews, P., 1978, Petrology and stratigraphic relations of a mafic volcanic complex and associated sediments of an ophiolite in Southern Haiti:
 Masters Thesis, University of Florida, Gainesville. 82 p.
- Del Busto Alvarez, R., 1975, Las Terrazas marinas de Maisi: Ciencias, Serie 7, Geografia, No. 10, (Centro de Informacion Cientifica y Tecnica Universidad de la Habana, Cuba), p. 1-12. plus figures.
- Dengo Gabriel, 1973, Estructura Geologica, Historia Tectonica y morfologia de America Central: Instituto Centre-Americano. de Investigación y Tecnologia Industrial (ICAITI), Guatemala (Segunda edicion revisada) 1973, 52p.
- Diebold, J.B., P.L. Stoffa, P. Buhl, an M. Truchan, 1981, Venezuela Basin crustal structure: Jour. Geophys. Res. v. 86, No. 39, p. 7901-7923.
- Dodge, R.E., R.G. Fairbanks, L.K. Benninger and F. Maurrasse, 1981, Elevated Pleistocene coral reefs of Hafti: Uranium series dating: Geol. Soc. America, Ann. Meeting. Abs. v. 13, No. 7, p. 440.
- Dodge, R.E., R.G. Fairbanks, L.K. Benninger and F. Maurrasse, 1983, Pleistococene sea levels from raised coral reefs of Haiti: Science, v. 219, p. 1423-1425.
- Donnelly, Th. W. & J.J.W. Rogers, 1978, the distribution of igneous rock suites through the Caribbean, in H.J. Mac Gillavry & D.J. Beets (eds): The 8th Caribbean Geological Conference (Willemstad, 1977), Geol. Mijnbouw, v. 57: p. 151-162.
- Draper, G., and J.F. Lewis, 1980, structure, petrology and tectonics of the Amina schists, north-central Dominican Republic: 9th Carib. Geol. Conf. Santo Domingo, Dominican Republic, Abs. p. 18-19.
- Edgar, N.T., J.I. Ewing & J. Hennion, 1974, Seismic refraction and reflection in Caribbean Sea: Amer. Assoc, Petrol. Geol. Bull. v. 55: p. 833-870.
- Edgar, N.T., J. B. Saunders, H.M. Bolli, R.E. Boyce, W.S. Broecker, T.W. Donnely, J.M. Gieskes, W.W. Hay, R.M. Horowitz, F. Maurrasse, H. Perez Nieto, W. Prell, I. Premoli-Silva, W. Riedel, N. Schneidermann, L.S. Waterman, 1973, Initial Reports of the Deep Sea Drilling Project, V. 15, Washington (U.S. Government Printing Office) 1137 p.

- Ewing, J., J. Antoine and M. Ewing, 1960, Geophysical measurements in the western Caribbean Sea and in the Gulf of Mexico: Jour of Geophys. Res., v. 65, p. 4087-4126.
- Ewing, J., M. Talwani & M. Ewing, 1965, Sediment distribution in the Caribbean Sea: Proc. 4th Caribbean Geol. Conf. p. 317-323.
- Ewing, J., M. Talwani, M. Ewing & N.T. Edgar, 1967, Sediments of the Caribbean: in Study in tropical oceanography, Univ. Miami 5, p. 88-102.
- Foreman, H., 1973, Radiolaria of leg 10 with systematics and ranges for the families Amphipyndacidae, Artostrobiidae, and Theoperidae; in J.L. Worzel et al., 1973, Initial Reports of the Deep Sea Drilling Project, v. 10, Washington (U.S. Government Printing Office), p. 407-474.
- Frankel, A., 1982, A composite focal mechanism for microearthquakes along the northeastern border of the Caribbean plates: Geophys. Res. Letters, v. 9, No. 5, p. 511-514.
- Frost, S., 1972, Evolution of Cenozoic Caribbean coral faunas: in Transactions 6th Caribbean Geol. Conf., Margarita. Venezuela, p. 461-464.
- Hafner, W., 1951, Stress distributions and faulting: Geol. Soc. America, Bull, v. 62, p. 373-398, 1 pl.
- Hopkins, H.R., 1973, Geology of the Aruba Gap Abyssal Plain near DSDP Site 153; in N.T. Edgar et al.: Initial Reports of the Deep Sea Drilling Project 15: 1039-1050.
- Houtz, R. & J. Ewing, 1976, Upper crustal structures as a function of plate age: Jour Geophys. Res. v. 81, p. 2490-2499.
- Hunerman, A.E., 1972, Mid Tertiary biostratigraphy of the Central Plateau of Haiti: M.S. Thesis, Louisiana State University, U.S.A., 107 p.
- Jones, R.G., 1918, A geological reconnaissance in Haiti, a contribution to antillean geology: J. Geol. v. 26, p.728-752.
- Kent, D.V., 1977, An estimate of the duration of the faunal change at the Cretaceous-Tertiary boundary: Geology, V. 5, p. 769-771.
- Kent, D.V., and F. Maurrasse, 1982, Paleomagnetic results from the Cretaceous Dumisseau Formation of Haiti: in F. J-M.R., Maurrasse, editor, Transactions 1^{er}Colloque sur la Geologie d'Haîti, Port-au-Prince, 27-29 Mars 1980, p. 236-244.
- Kesler, Stephen E. 1971, Petrology of the Terre-Neuve Igneous Province, Northern Haiti: in Donnelly, Thomas W., editor, Caribbean Geophysical, Tectonic and Petrologic studies: Geological Society of America Memoir, 130 p. 119-137.
- Kesler, S.E., J.F. Sutter, L.M. Jones and R. L. Walker, 1977, Early Cretaceous basement rocks in Hispaniola: Geology, v. 5, p. 245-247.
- Kesler S.E. and J.F. Sutter 1979, Compositional evolution of intrusive rocks in the eastern Greater Antilles Island arc: Geology v. 7 no. 4, p. 197-200.
- Krushensky, R.D., 1978, Unconformity between Cretaceous and Ecocene rocks in central Puerto Rico: a concept rejected, in Mac Gillavry, H.J., and Beets, D.J., editors: The 8th Caribbean Geol. Conference (Wilhemstad, 1977), Geol. Mijnbouw, v. 57, No. 2, p. 227-232.
- Ladd, J.W. 1976, Relative motion of South America with respect to North America and Caribbean tectonics: Geol. Soc. Amer. Bull. v. 87, p. 969-976.
- Ladd, J.W. & J.S. Watkins, 1977, Compressional features of the northern and southern margins of the Venezuela Basin and layering within the crust of the Venezuela Basin from multichannel reflection data: 8th Caribbean Geol. Conf. Abstr. p. 96-97.

- Ladd, John W, J. Lamar Worzel and Joel S. Watkins, 1977, Multifold Seismics reflection records from the northern Venezuela Basin and the north slope of the Muertos Trench: in Talwani and Pitman, editors, Island Arcs, Deep Sea Trenches and Back-Arc Basins: American Geophysical Union, Maurice Ewing series 1, p. 41-56.
- Lewis, J.F, 1980, Resume of the Geology of Hispaniola; in Field Guide, 9th Carib. Geol. Conf. Santo Domingo, Dominican Republic. p. 5-31.
- Llinas Romeo, 1972, Geologia del Area Polo Duvergé, Cuenca de Enriquillo: CODIA Publicación Sto. Do., Part 1 no. 31 p. 55-65, Part II no. 32 p. 40-53.
- Ludwig, W.I., R.E. Houtz & J.J. Ewig, 1975, Profiler-Sonobuoy measurements in Columbia and Venezuela Basins, Caribbean Sea: Amer. Assoc. Petrol. Geol. Bull. v. 59:115-123.
- Malfait, B.I. and M.G. Dinkelman, 1972, Circum-Caribbean Tectonic and Igneous Activity and the evolution of the Caribbean Plate: Geol. Soc. America Bulletin, v. 83, p. 251-272.
- Matthews, J.E. & T.L. Holcombe, 1976, Regional Geological/Geophysical study of the Caribbean Sea (Navy ocean area NA-9) Geophysical maps of the eastern Caribbean: Naval Ocean. Off. Ref. Publ. RP3 (Dept. Navy, Washington, D.C.).
- Maurrasse F., 1973, Sedimentary structures of Caribbean Leg 15 Sediments: in Edgar, N.T., et al., 1973: Initial Reports of the Deep Sea Drilling Project, v. 15, U.S. Govt. Printing Office, Washington, D.C., p. 833-845.
- Maurrasse, F., 1976, Cretaceous and Tertiary pelagic facies distribution in the Southern Peninsula of Haiti and the adjacent Caribbean Sea: a view at Caribbean paleogeography and palecology: 3rd Latin American geol. Congr. (Mexico) Abstr. p. 48.
- Maurrasse, F., 1979, Cenozic Radiolarian Paleobiography: Implications concerning Plate Tectonics and Climatic Cycles: Palaeogeogr., Palaeoclimat., Paleoecology, v. 26, p. 253-289.
- Maurrasse, F. J-M.R., 1982a, New data on the stratigraphy of the Southern Peninsula of Haiti; in F. Maurrasse, editor, Transactions du 1^{er}Colloque sur la Géologie d'Hafti, Port-au-Prince, 27-29 Mars 1980, p. 184-198.
- Maurrasse, F. J-M.R, 1982b, Les Marges continentales d'Haiti; in F. Maurrasse, editor, Transactions du 1^{er}Colloque sur la Géologie d'Haiti, Port-au-Prince, 27-29 Mars 1980 p. 200-206.
- Maurrasse, F. J-M.R, 1982c, Relations between the geologic setting of Hispaniola and the origin and evolution of the Caribbean; in F. Maurrasse, editor, Transactions du 1^{er}Colloque sur la Geologie d'Haiti, Port-au-Prince, 27-29 Mars 1980, p. 246-264.
- Maurrasse F., U. Sayeed, G. Georges, F. Pierre-Louis & J.G. Rigaud, 1977, Ophiolite complex of the Southern Peninsula of Haiti: a view at the Caribbean Crust: 8th Caribbean geol. Conf. Abstr. p. 115-116.
- Maurrasse F., Husler, J., G. Georges, Schmitt, R and Damond, P., 1979a, Upraised Caribbean Sea Floor below acoustic reflector B" at the Southern Peninsula of Haiti: Geologie en Mijnbouw, v. 8, no. 1, p. 71-83.
- Maurrasse F., Pierre Louis F., Rigaud J.G., 1979b, Upper Cretaceous to lower Paleocene Pelagic calcareous deposits in the southern Peninsula of Haiti: their bearing on the problem of the Cretaceous-tertiary boundary 4th Latin-American Geol. Congress, Trinidad, p. 65.
- Maurrasse F., P. Crews and R. Visconti, 1980a, Radiolarian biostratigraphy and paleoecology of the Eastern Part of the Southern Peninsula of Haiti: Amer. Assoc. Petroleum Geologists Bulletin, v. 64, no. 5, p. 747.

- Maurrasse, F., Pierre-Louis, F. and Rigaud J. G., 1980b, Cenozoic pelagic sequences in the Southern Peninsula of Hispaniola: their implications concerning the tectonics of the Beata Ridge: 9th Caribbean Geological Conference, Sto. Domingo, Eominican Republic., p. 48.
- Maurrasse, F. J-M.R. and F. Pierre-Louis, 1982 a, Relations entre les grandes zones de faille de la région Sud d'Haîti et la production du sable dit de "Laboule"; in F. Maurrasse, editor, Transactions du 1ºPColloque sur la Géologie d'Haîti, Port-au-Prince, 27-29 Mars 1980, p. 126-133.
- Maurrasse, F. J-M.R., F. Pierre-Louis and J-G. Rigaud, 1982b, Cenozoic facies distribution in the Southern Peninsula of Haiti and the Barahona Peninsula, Dominican Republic: in Transactions 9th Caribbean Geological Conf. Santo Domingo, Dominican Republic, p 161-174.
- Mitchell, R.C., 1953, New data regarding the diorite rocks of the West Indies: Geol. Mijnbouw N.S. v. 15; p. 285-295.
- Molnar, P. & L. Sykes, 1969, Tectonics of the Caribbean and Middle America regions from focal mechanisms and seismicity: Geol. Soc. Amer. Bull., v. 80, p. 1639-1684.
- Molnar, P. and L.R. Sykes, 1971, Plate tectonics in the Hispaniola area: discussion: Geol. Soc. America Bull., v. 82, p. 1123-1126.
- Moody, J.D., and M.J. Hill, 1956, Wrench-fault tectonics: Geol. Soc. America Bull., v. 67, p. 1207-1246.
- Nicolini, Ph., 1977, Porphyres Cuprifères du Nord-Quest d'Haiti: Thèse de 3ème Cycle, Université de Paris 6, France, 208 p.
- Officer, C.B., J.I. Ewing, J.F. Hennion, D.G. Harkrider and D.E. Miller, 1959, Geophysical investigations in the eastern Caribbean: summary of 1955 and 1956 Cruise, chap. 2: Physics and chemistry of the earth, v. 3, p. 17-109; Pergamon Press, N.Y.
- Pierre, M.G., 1982, Les Roches cristallines d'Haîti: synthese des trauaux de pétrographie et repérage des indices de minéralisation; <u>in</u> F. Maurrasse, editor, Transactions du 1^{er}Colloque sur la Géologie d'Haîti, Port-au-Prince, 27-29 Mars 1980, p. 216-234.
- Reeside, J.B., Jr., 1947, Upper Cretaceous ammonites from Haiti: U.S. Geol. Surv. Prof. Paper 214A:1-11.
- Rigaud, J-G, and F.Pierre-Louis, 1982, Potentiel Petrolier d'Haiti, in F. Maurrasse, editor, Transactions du lerColloque sur la Géologie d'Haiti, Port-au-Prince, 27-29 Mars 1980, p. 13-23.
- Roemer, L., W. Bryant and D. Fahlquist, 1976, A geophysical investigation of the Beata Ridge: in M.R. Causse (ed), Trans. 7th Caribbean Geol. Conf., p. 115-125.
- Russell, N., M. Seaward, J. Rivera, K. McCurdey and S.E. Kesler, 1980, The geology of the Pueblo Viejo gold-silver oxide ore body, Dominican Republic: Abs. 9th Carib. Geol. Conf. Santo Domingo, Dominican Republic, p. 64-65.
- Sayeed, U., F. Maurrasse, K. Keil, J. Husler and R.A. Schmitt, 1978, Geochemistry and petrology of some mafic rock from Dumisseau, Southern Haiti: EOS, Transactions, American Geophys Union, vol. 59, no. 4, p. 403.
- Scherer, J., 1912, Les grands tremblements de terre de l'11e d'Haiti: Observatoire météorologique du Séminaire-Collège St. Martial, Bulletin semestriel, juillet-déc., p. 153-162.
- Schneidermann, Nahum, 1973, Pelagic limestone in the Central Caribbean: in Edgar, N.T., et. al., Initial Reports of the Deep Sea Drilling Project, vol. 15, p. 773-793. (U.S. Government Printing Office, Washington, D.C.).

- Schubert, C., 1980, Edades 230-Th/234-U de las terrazas marinas pleistocenas de la costa suroriental de la Republica Dominicana: Abs. 9th Carib. Geol. Conf., Santo Domingo, Dominican Republic, p. 66-67.
- Stoffa, P.L., A. Mauffret, M. Truchan and P. Buhl, 1981, Sub-B" layering in the Southern Caribbean: The aruba gap and Venezuela basin: Earth Planet. Sci. Letters, v. 53, p. 131-146.
- Sykes, L.R. and M. Ewing, 1965, The seismicity of the Caribbean Region: Jour. of Geophys. Research, v. 70, no. 20, p. 5065-5704.
- Tippenhauer, L.G., 1893, Die Insel Haiti; 693 p. 21 pls., 23 figs., Leipsig, Germany.
- Tippenhauer, L.G. 1901a, Beitrage zur Geologie Haitis: V., Das La Selle-Gebirge, die Cul-de-Sac-Ebene, und das Salzseengebiet: Petermanns Mitt. v. 47:169-178 pls 13-14.
- Tippenhauer, L.G., 1901b, Beitrage zur Geologie Haftis. IV: Das Lignitlager von Maissade: Petermanns Mitteilunger, v. 47, p. 121-127.
- Tippenhauer, L.G., 1909, Neuer Beitrag zur Topagraphie, Bevölkerungskunde und Geologie Haitis: Petermanns Geographische Mitteilunger, v. 55. p. 49-57.
- Truan y Luard, A et Witt, O.N., 1898, Die Diatomaceen das Polycystinenkreide von Jérémie in Hayti, Westindien, 24 p, 7 pls, Berlin, Germany.
- Vail, P.R., R.M. Mitchum, and S. Thompson, 1977, Seismic Stratigraphy and global changes of sea level, Part 4: Global cycles of relative changes of sea level; in C. Payton, editor, seismic stratigraphy-applications to hydrocarbon exploration: Am. Assoc. Petrol. Geol., Memoir 26, p. 83-97.
- Van den Bold, W.A., 1974, "Neogene of Central Haiti", Am. Assoc. Petrol. Geologists, Bull., vol. 58, p. 533-539.
- Van den Bold, W.A., 1981, Distribution of Ostracoda in the Neogene of Central Haiti: Bull. Am. Paleontology, vol 79, No. 312, 136 p.
- Vaughan, T.W., C Wythe Cooke, Condit D.D., Ross, C.P., Woodring, W.P. and Calkins, F.C., 1921, A Geological Reconnaissance of the Dominican Republic: Dominican Republic Geological Survey Mem., 288 p, 23 pls, Washington, D.C.
- Vespucci, P., 1980, Preliminary account of the petrology of the Late Cenozoic volcanic province of Hispaniola: Abs. 9th Carib. Geol. Conf., Santo Domingo, Dominican Republic, p. 76.
- Waggoner, D. G., 1978, Sr and Nd-isotope study of the Caribbean basalts belongings to the B" events: Trans. Amer. Geophys. Union, v. 59 no. 4, p. 404.
- Watkins, J. and Th. Cavanaugh, 1976, Implications of magnetic anomalies in the Venezuela Basin: in R. Causse (ed), Trans. 7th Caribbean Geol. Conf. p. 127-138.
- Westercamp, D., 1980, Diversity, structural control and orgin of recent volcanic rocks in the Lesser Antilles: Abs. 9th Carib. Geol. Conf., Santo Domingo, Dominican Republic, p. 78-79.
- Woodring, W.P., 1922a, Middle Eocene Foraminifera of the genus Dictyoconus in the Republic of Haiti: Washington Acad. Sci, Jour, vol. 12, p. 244-247.
- Woodring, W.P., 1922b, Stratigraphy, structure, and possible oil resources of the Miocene rocks of the Central Plain: Republic of Haiti, Department of Public Works-Geological Survey of the Republic of Haiti. 19 p. + 1 map.
- Woodring, W.P., J.S. Brown et W.S. Burbank, 1924, Géologie de la République d'Haiti, Dept. des Travaux Publics, Port-au-Prince, 710 p. English version: Lord Baltimore Press, Baltimore 631 p.